

## "Land rush: simulating negotiations over land rights"

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### Abstract

LAND RUSH is a board game that allows participants to critically assess the ways in which different social classes face both opportunities and constraints in securing land rights and in managing the acquired land sustainably in an extremely competitive environment. The game illustrates three characteristics of contemporary land dynamics in an altering world. First, the logics of smallholder farmers are largely oriented towards risk diversification, and often contrast with those of current agrarian policies of most international and national policy makers, oriented towards maximal production and commercialization. Second, the rules of the game in the land arena are not uniformly defined, but are characterized by a reality of legal pluralism. Third, access to or exclusion from land is the result of a negotiation process in which actors with unequal power relations interact and compete with each other. Better-off actors have a comparative advantage in negotiations over land rights. Howe...

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## **LAND RUSH: Simulating negotiations over land rights**

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### **ABSTRACT:**

LAND RUSH is a board game that enables players to critically assess how investors from different social classes are presented with different kinds of opportunities and constraints as they try to acquire land and to manage it sustainably in a highly competitive environment. The game reflects three characteristics of contemporary land dynamics in a changing world. First, it illustrates that smallholder farming is oriented largely towards risk spreading, while current agrarian policies of international and national policymakers tend to be geared towards production maximization and commercialization. Second, it shows how the rules of play in the land arena are not unequivocally defined, but are subject to change in a context of legal pluralism. Third, it demonstrates that access to and exclusion from land depend on a process of interaction and competition between actors possessing unequal power and resources. Better-off actors have a comparative advantage in asserting their land rights, but poorer actors still exert agency, albeit in constrained ways.

**KEYWORDS:** SIMULATION; COMPETITION OVER LAND; RURAL POLICY; LAND GRABBING; LEGAL PLURALISM; POWER RELATIONS; SUSTAINABLE LAND USE

LAND RUSH is a board game that simulates certain real-life dynamics in the land arena, including changeable agrarian policies, institutional plurality and unequal power relations in land-right negotiations. It enables players to critically assess how investors from different social classes are presented with different kinds of opportunities and constraints as they try to acquire and manage land sustainably in an extremely competitive environment. Each player represents a farmer of a particular social class (rich, middle class, poor) who enters a competitive land arena. As the game unfolds, the players engage in a scramble to acquire as much land as possible and to manage it sustainably. Acquired land may be used to cultivate one of three crops (cassava, tomatoes or oil palms) that will generate an income after each growing season. However, farming land comes at a cost, which is payable, also at the end of each season. Moreover, the players are confronted with shifting land rights and with 'events' that may profoundly alter their stakes in the land arena. As the game progresses, they must negotiate with one another over their respective land rights. Consequently, each game has a different and unique dynamic. Furthermore, the central role of negotiation in the game echoes the importance of mediation in the real-life land arena: land access schemes and land rights are not determined in a mechanical way or shaped in a political vacuum, but are negotiated in a setting characterized by institutional plurality and unequal power relations. This explicit focus on power relations and the possibility for players to negotiate certain rules differentiates LAND RUSH from other games simulating land issues in developing countries<sup>1</sup>.

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<sup>1</sup> The online game '3rd World Farmer' (see [www.3rdworldfarmer.com](http://www.3rdworldfarmer.com)) approximates to some of the dynamics that LAND RUSH seeks to simulate: individual players are managers of a small-scale African farm and are faced with various difficulties. However, in LAND RUSH, the players also

LAND RUSH has both factual and socio-emotional learning objectives (Hromek and Roffey, 2009). Among the factual goals are the strivings to improve players' awareness of the dynamics unfolding in the land arena in developing countries and to enhance their understanding of how social inequality and unequal power relations may impact on negotiations over access to natural resources. The socio-emotional learning objectives include the experience of "how institutional rules of the game and power relations influence agency of different socioeconomic groups and how this can induce poverty and inequality" (Ansoms and Geenen 2012: 853-854).

The target audience consists primarily in those with an interest in development studies, agrarian change, land dynamics, environmental issues, poverty and inequality.

In this paper, we first briefly sketch the various components of land arenas in developing countries that inspired us to develop the rules of the game. Subsequently, we discuss the course of the game on the basis of the participant's guide and the facilitator's guide. Third, we elucidate the debriefing process, a crucial phase in the game. Together, the facilitator's guide, the participant's guide and the debriefing suggestions constitute a ready-to-use playing package. Fourth, before concluding, we link the game dynamics to real-life land-ownership dynamics in developing countries.

### **Introduction: dynamics in the land arena**

As the processes of globalization and liberalization intensify, developing countries (and particularly those in Sub-Saharan Africa) are increasingly facing issues regarding the commercialization of land. First and foremost, they are confronted with a variety of so-called large-scale actors - international consortia, 'investor' States, and private entrepreneurs - seeking to acquire land for the production of food crops or biofuels, for the exploitation of non-renewable natural resources, for urban expansion, etc. At the same time, at a more local level, they are experiencing growing competition for land due mainly to rising demographic pressures in already land-scarce environments. The respective positions of these large-scale and local actors, and the underlying issue of sustainable land management, are now the focus of a growing body of research. Increasingly, the questions at hand are integrated into ongoing debates on climate change, food security and sustainable food production, and environmental sustainability (see for example Van Der Ploeg 2010; Weis 2007; Patel 2009; De Shutter 2011).

In this introduction, we highlight three characteristics of contemporary land dynamics in today's changing world. First, we contrast the reality of smallholder farming with the logic underlying some of the agrarian strategies devised by many international and national policymakers. Second, we frame how the rules of play in the land arena are not unequivocally defined, but subject to change and interpretation in a context of legal pluralism. Third, we discuss how access to or exclusion from land depend on a process of interaction and competition between actors possessing unequal power and resources. Still, although the better-off actors enjoy a comparative advantage in negotiations over land rights, the poorer actors do exert some agency, albeit in constrained ways.

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engage in face-to-face negotiation, which makes the political and social aspects of land competition more tangible. Moreover, after having played the game, the players reflect together and individually on its significance during a debriefing phase.

### The logic of smallholder farming versus the logic of agrarian policies

For decades, the agricultural sector was neglected by the international community and by national governments. However, since the World Bank's 2008 World Development Report, there has been renewed interest in its potential as a motor for pro-poor growth. But in spite of the emergence of a pro-peasant rhetoric (see for example World Bank 2007), multilateral agencies, donor countries, and national governments continue to adhere to an industrial agricultural model, characterized by large-scale market-oriented operations, often at the expense of small-scale family farming (Anseeuw, et al 2011). As a result, smallholder farmers face ever greater constraints to securing their land rights in an increasingly competitive land arena. Compared to large-scale agriculture, smallholder farmers are less preoccupied with profit maximization and are more averse to risk-taking.

At the same time, small-scale farming offers considerable advantages. First, there is ample empirical evidence of an inverse relationship between farm size and land productivity (Sen 1962; Berry and Cline 1979, Cornia 1985, Carter 1984). Second, smallholder farming is an important source of income to a large majority of rural populations in many developing countries. Most of these countries lack an alternative economic sector with the capacity to absorb labor on a massive scale. Indeed, "in theory, the labour released from the land would be absorbed by urban industry, incorporated into the labour markets of the growing urban centres. But reality has not confirmed this theory" (Veltmeyer 2009: 402). Finally, smallholder farming is not just a source of revenue; it is also a way of life and thus an integral part of the social tissue. Changes to local livelihoods may therefore impact profoundly on how social life is structured, with potentially alienating effects for some.

Neo-liberal agrarian policies, on the other hand, tend to be geared towards productivity maximization and stimulating commercial farming (Veltmeyer 2009; Akram-Lodhi 2008). They are frequently embraced by a matured African elite that has reallocated public resources to institutional and technological innovation for the benefit of large-scale farming at the expense of 'backward' small-scale subsistence farming (Moyo 2008). However, critical questions have been raised with regard to the sustainability of such commercially-oriented policies. Akram-Lodhi (2008: 471), for example, criticizes how smallholder agriculture is now declared unviable, after the systematic undermining of smallholders 'by disinvesting and exposing them to "free" market forces on an uneven playing field'. In other words, the rules of the game have been bent in favor of large-scale players. Moreover, many developing countries are now confronted with large-scale investors who are seeking to acquire vast areas of land, a phenomenon that is referred to as 'large land acquisitions' by some (World Bank 2010A) and as 'land grabbing' by others (De Schutter 2009).

### Rules of the game in the land arena: legal pluralism

This brings us to a second characteristic of contemporary land dynamics. Although there would appear to be a societal consensus on the rules of play in the land arena, in reality those rules are not fixed or unequivocally defined. On the contrary, negotiations over land rights commonly take place in a context of legal pluralism, understood as 'the possibility that within the same social order, or social or

geographical space, more than one body of law, pertaining to more or less the same set of activities may co-exist' (Von Benda Beckmann and Von Benda Beckmann 2006:14). A society is made up of different social fields, including villages, ethnic communities, a variety of associations and the state. Each field has different loci of authority that overlap and interact with those of other social fields. Hence, social fields are merely semi-autonomous: each generates internal rules and symbols, yet also remains sensitive to decisions and rules generated by surrounding fields (Moore 1978). Moreover, various kinds of cognitive and normative orders may occur concurrently within a single social field (Meinzen-Dick and Pradhan 2002).

In the land arena, this implies that a multitude of norms, both formal and informal, coexist, interact, and potentially reinforce or contradict each other. The mere existence of a formal land law and/or policy does not preclude that informal and customary arrangements continue to regulate access to and exclusion from land. Furthermore, within the informal set of norms, different rules may actually contradict one another. This regulatory ambivalence and the existence of multiple normative orders creates scope for human agency. They allow social actors to engage in 'forum-shopping', defined as using "different normative repertoires in different contexts or forums depending on which law or interpretation of law they believe is most likely to support their claim" (Meinzen-Dick and Pradhan 2002:5). At the same time, however, forum shopping is embedded in a complex network of negotiated power relations, which brings us to the third point.

#### Access to or exclusion from land: negotiations and power relations

A third major issue in the land arena is access to or exclusion from land rights in consequence of negotiation processes between actors possessing unequal power. In this sense, the present negotiation game revolving around land rights is reminiscent of a 'political arena', defined by Olivier De Sardan (2005: 186) as a "locus of political conflict", a space where "heterogeneous strategic groups confront each other, driven by more or less compatible (material or symbolic) interest, the actors being endowed with a greater or lesser level of influence and power". The confrontation within the political arena does not take the form of a physical fight, nor is it per definition a direct, open conflict between opponents. Instead, social actors interact, negotiate and compete with each other for a common stake, such as the allocation of land rights. The outcome of such negotiations depends largely upon "agents' power to act and to reproduce, challenge or change the rules that govern the control, use and transformation of resources" (Bebbington, 1999: 2022).

#### **Participants' Guide**

You are a farmer of a particular social class (rich, middle class, poor) who must compete with other farmers in a struggle for land. The purpose of the game is to acquire wealth: the player who succeeds in obtaining the most land and making the most money over the course of ten farming seasons ultimately wins the game.

In each season, you roll the dice. Depending on what you roll, you may buy property and plant crops (cassava, tomatoes, or oil palms) in any of four zones, provided that you have sufficient money. You might also choose to upgrade the value of your land by replacing cheap crops with more expensive ones, or by playing 'upgrade cards' after acquiring adjacent plots planted with the same crop. At the end of each season,

you receive an income based on your land possessions, crop types and upgrades, and you must pay a cost to carry on your operations over the next season. After five seasons, an event takes place in each of the four zones. These events will have a profound impact over the next five seasons on whoever owns land in the affected zone. As the game progresses and you compete for money and land, it will become apparent that the poorer and middle-class players are at a comparative disadvantage. So depending on the class you belong to, you will need to adopt different strategies in order to thrive or even to survive.

### Setting up the game

- Construct the playing board by placing the four constituting zones (see annex) in the middle of the table as follows, with the event card pointing to the center:



- Place one 'event card' (see annex) face down on each of the zones, so that no-one knows which event will strike in which zone.
- Preferably, there should be four players (1 rich, 1 middle class, and 2 poor). Each player plays with a specific symbol (see annex). Distribute the roles of the players randomly and allocate the appropriate starting capital. The role of banker may either be played by an additional participant or by the middle-class player.
  - Star: symbol of rich – starting capital \$30
  - Circle: symbol of middle class – starting capital \$15
  - Triangle and Square: symbols of poor – starting capital \$5 each
- Roll the dice to determine the playing order: whoever rolls highest plays first, thereafter turns are taken clockwise.

### Acquiring and cultivating land

- Each turn begins with a roll of the dice. The rich player is always entitled to roll both dice. The middle-class and poor players can only roll one, except if they own a factory (see infra).
- The number rolled determines how many plots the player may buy. Prices depend upon the crop type planted (see table in annex). You may choose to buy fewer plots than the number permitted by the roll of the dice. Also, you are free to acquire land in any of the four zones on the playing board. Claim your land by placing your symbol (star, circle, triangle, or square) on plots in any of the four zones of the playing board. Place a crop card on top of your symbol.
- If you succeed in buying adjacent plots cultivated with the same crop type, you may upgrade your land by means of upgrade cards. Plots are considered adjacent if they touch horizontally or vertically, but not diagonally. Acquiring adjacent plots cultivated with different crop types does not entitle you to upgrade the land. Crop types may however be changed: you may choose to either upgrade a crop (by paying the additional cost) or to downgrade it (free).
  - Place a hoe on top of four adjacent plots.
  - Place a truck on top of six adjacent plots.

- Place a factory on top of eight adjacent plots.

### Playing the game

- **Taking turns buying land:** Roll the dice. Decide how much land to buy in any of the four zones, and plant it with a crop of your choice. Players take turns acquiring land in this way.
- **Receiving returns for past season:** After each round of turns, the season ends and each player receives a return on investment from the bank (see table in annex for exact amounts).
- **Paying costs for next season:** Next, you must pay an exploitation cost for the next season. This cost is determined by the roll of a single die.
  - 1= pay 1\$ for each cassava plot
  - 2= pay 2\$ for each cassava plot
  - 3= pay 2\$ for each tomato plot
  - 4= pay 4\$ for each tomato plot
  - 5= pay 3\$ for each palm plot
  - 6= pay 6\$ for each palm plot
- You may now **negotiate** sales, purchases or exchanges of plots with the other players. The price is determined by mutual agreement.
- **Reshuffle of land rights:** When all players have received their income and paid exploitation costs, they are confronted with the possibility of shifting land rights. This process is simulated by a roll of a single die.
  - 1= if you are poor, you may move your own or another player's property on the playing board
  - 2= if you are middle class, you may move your own or another player's property on the playing board
  - 3= if you are middle class, you may grab a plot from another player and plant it with a crop of your choice at no cost
  - 4= if you are rich, you may move your own or another player's property on the playing board
  - 5= if you are rich, you may grab a plot from another player and plant it with a crop of your choice at no cost
  - 6= if you are rich, you may grab two plots from other players and plant them with crops of your choice at no cost

### Event cards

- After 5 full seasons, 'events' take place in each of the four zones by turning around the respective event cards. Costs and returns may change accordingly (see table in annex).
- **Market:** The presence of a market upgrades the value of your land. Over the next five rounds, costs and returns are double what they were during the first five rounds.
- **Mine:** The presence of mineral resources upgrades the value of your land. Remove all crop types. Recheck whether without crops, you have additional adjacent plots and adapt your upgrades according. Henceforth, you are entitled to a higher fixed return per plot. However, land also becomes more expensive to purchase.
- **Private investor:** A private investor has moved in and has turned the entire zone into a large-scale oil palm plantation. Players can no longer acquire land in this zone. If you were already growing palm plots in the affected zone, you

retain them and continue to generate revenue. If you were growing cassava or tomatoes in the affected zone, you receive a fixed salary per plot. Upgrades are removed.

- **Cooperative:** If you are poor, you form a cooperative with the other poor player. Together, you earn upgrades for your accumulated common property, regardless of whether it is adjacent or not. Count the number of plots you have planted with a particular crop type in the entire zone (regardless of whether these plots are adjacent or not) and add upgrades accordingly. Decide on how you will share the joint revenue. Costs and returns of plots in this zone are unchanged.
- **Disease:** A disease ruins the tomato and palm oil harvest. All previous upgrades are lost, and no further upgrades are possible. All crops now generate the same costs and returns.
- **Flooding:** All property in the flooded zone is lost. Remove all cards and crops. The struggle over land in this zone starts from scratch, with unchanged costs and returns.

### Negotiations

Players may borrow from or lend money to one another, they may buy or sell turns and plots of land to and from each other, and they may even give away land to other players. Players may, at all time, strike deals over permanent or temporary forms of collaboration. Should any player be caught cheating, then the others may decide collectively on whether or not to impose a sanction.

### Ending the game

The ultimate purpose of the game is to acquire as much land and money as possible. As will become apparent as the game progresses, this is significantly more difficult for the poor and middle-class players than for the rich player.

## **Facilitator's Guide**

The simulation mimics a situation where farmers of divergent socioeconomic classes (rich, middle class, poor) must compete over arable land. The learning objective of the game is to improve participants' understanding of the different kinds of opportunities and constraints that different social classes in society face in their negotiation over land rights and in the management of their farm.

This simulation game is suitable for **groups** of various sizes. Ideally, there should be 4 players per game (one rich, one middle class, and two poor), though it is also possible to play with just 3 players (one rich, one middle class, one poor). An additional player may act as the banker. The facilitator should know the exact group size in advance, in order to efficiently subdivide the whole group into smaller groups of 3, 4 or 5 players per game.

The table below lists the **materials** that are needed to play the game. Examples of each of the playing pieces are provided in annex. These pieces were developed by Okke Bogaerts (independent designer) and Julie Servais ([www.afd.be](http://www.afd.be)). They may be downloaded free of charge from [www.land-rush.org](http://www.land-rush.org).



**Table 1: Enumeration of materials needed**

<b>Materials</b>	<b>Number</b>	<b>Indicative size</b>
Playing board	4 sheets of paper featuring 36 rectangles and one larger rectangle in top right corner for the event card	A4 or A3 sheets
Player cards	4 times 96 player cards bearing the symbol of the corresponding player	Cards of same size as rectangles on playing board
Crop cards	3 times 100 small crop cards representing cassava, tomato or palm oil	Cards smaller than player cards (alternatively, one could use three different types of buttons )
Upgrade cards	3 times 30 cards representing hoe, truck or factory	Cards that can stand on the playing board; same length as the player cards
Event cards	6 cards representing respectively market, mine, private investor, cooperative, disease, flooding	Same size as the event card space in each of the zones
Money	60 notes of 1\$, 5\$, 10\$ and 50\$	-
Table with costs and returns	One table per player according to format in annex below	-
2 regular dice		

The facilitator's first task is to explain the rules of the game (see participants' guide). A one-page printable summary of the rules is available from [www.land-rush.org](http://www.land-rush.org). The game unfolds over ten rounds, each of which corresponds to a farming season. In turn, each player

- 1) rolls the dice,
- 2) depending on the outcome of the roll, may buy land and plant crops in any of the four zones, provided that the player has enough money (see table in annex),
- 3) may upgrade owned land by planting more valuable crops or by playing 'upgrade cards' received for ownership of adjacent plots (see participants' guide)

After each season, i.e. one round of turns, each player:

- 1) receives last season's return, based on their land holdings and crop types (see table in annex);
- 2) pays next season's exploitation costs, based on their land holdings and crop types (see table in annex);
- 3) faces the risk of a land-rights reshuffle (see participants' guide).

Then begins a new season and a new round of turns. After the fifth season, the event cards at the center of the playing board are turned around. Over the next five rounds, each of these events will have a profound impact on landowners in the affected zone (see table in annex). The ultimate purpose of the game is for individual players to acquire as much land and money as possible. As the game progresses, it will become clear to the players that this goal is much harder to accomplish for the poorer and middle-class players than for the rich player. The winner of the game is the player who has accumulated the greatest wealth after 10 seasons.

## **Debriefing**

The debriefing is arguably the most important stage of simulation games (Steinwachs, 1992). During this phase, students are encouraged “to reflect on their experiences during the simulation and consider their observations of others but to frame their answer as an analysis of social processes and structures rather than a description of personal experiences” (Inglis et al. 2004: 481). The purpose of this exercise is to extract players from the abstract game environment and to encourage them to transpose their simulation experiences to the complex reality of real-life dynamics in the land arena. For the LAND RUSH game, we propose an individual written debriefing, followed by a collective oral debriefing.

Written debriefings allow participants “to see new meanings in the activities and connect them to one’s life and the broader world” (Petranek 2000:109). The private communication setting in which a written debriefing takes place will encourage students to reflect in a personal way not only on behaviors and emotions, but also on connections with the literature and real-world dynamics. Furthermore, in an academic context, a written debriefing adds a formal aspect, whereby certain elements (particularly the analytical aspect of drawing parallels with the course material and real-world situations) may serve as a certificative evaluation tool. We propose a question-based written debriefing in three stages (events-analysis-reflection) in which players are invited to write an individual reflection, elaborating on how they feel the game dynamics relate to real-life land dynamics. The questions might include:

### **(1) Events:**

- Elaborate on three or four striking events in the game and your personal thoughts on issues that arose during the simulation game. Include events (factual), emotions (personal) and explanations (analytical) in your answer.

### **(2) Analysis**

- How would you assess individual roles and positions in the game?
- How would you assess the game interactions between players representing different socioeconomic groups?
- How do you feel the game dynamics relate to real-world land dynamics?

### **(3) Reflection:**

- Which real-life dynamics and complexities were not captured by the simulation game?

After the facilitator has read (and evaluated) these individual reflections, a collective oral debriefing takes place. During this phase, players can exchange ideas on how the simulation experience enhanced their understandings of land dynamics in developing countries. In an academic context, facilitators can use this oral debriefing to explicitly link the game dynamics to the course material. Here are some potential topics for discussion during this final debriefing:

### The outcome of the simulation game

- Ask the players what they think of the outcome of the simulation game and the scores obtained by players representing different social classes. How did the rich and middle-class players fare? Did any of the poor players succeed in accumulating a reasonable degree of wealth?
- Ask the players whether the outcome tied in with their expectations.

### Game strategies

- Ask the players to assess the game dynamics and the negotiations that took place during the simulation. What kind of strategies did they adopt? Did their strategy change in the course of the game? Was their strategy efficient? Did anyone cheat?
- Ask the players whether, with hindsight, they would alter their strategies.

### Links between game dynamics and real-world land dynamics

- Ask the players to what extent the logic underlying smallholder farming is reflected in the game dynamics (rules of the game and course of the game).
- Ask the players whether they felt the rules of the game were unequivocally defined or whether the game dynamics reflected aspects of legal pluralism.
- Ask the players how power relations impacted upon negotiations over land rights. Discuss with the players to what extent and in which manner the poorer categories were able to exercise agency in the simulation.
- Discuss with the players which broader real-life dynamics were effectively simulated by the different events that occurred in the course of the game. Discuss how these events may have changed the stakes of the different stakeholders, both within the context of the game and in real life.

### Discuss the strengths and weaknesses of this simulation.

- Ask the players to identify the strengths of the simulation.
- Devote ample attention to the weaknesses of the simulation: ask the players which real-life dynamics and complexities were not captured, e.g. due to the simplicity of the simulation game. The facilitator may initiate a discussion on ways of incorporating some of these aspects by modifying the basic rules. At the same time, however, it is important to stress that an abstract simulation game can never truly capture the full complexity of real-life dynamics.

### **Links between the game and real land dynamics**

In our introduction we highlighted three characteristics of land dynamics. First, we asserted that smallholder farmers are risk averse, so that they tend to favor agronomic decisions based on risk spreading, possibly at the expense of profit maximization. Agrarian policies, however, are often geared towards productivity maximization and commercialization, so that they tend to favor large-scale farming practices. Second, the land arena is characterized by a plurality of formal and informal rules that may be mutually reinforcing or contradictory. Moreover, the normative framework is dynamic and may change over time. This brings us to the third point, namely that access to or exclusion from land is the result of a negotiation process whereby divergent actors interact and compete with one another. Although all actors have agency, those who are better-off and well-connected have a comparative advantage in

being able to turn the rules of the game in their favor. These three dimensions are also reflected in the game dynamics of LAND RUSH, as indicated in the debriefing memos of a group of students of Development Studies (Master's level, 2012 and 2013, Louvain-la-Neuve, Belgium, over 50 participants)

With respect to the first point, there are different ways in which risks faced by farmers are reflected in the game dynamics. A first risk lies in the costs that are due at the end of each season. After all players have had their turn, a throw of the dice determines the profit margins on each of the crop types (returns minus costs). Costs and returns will vary for each crop type. Farmers must choose between relatively risk-averse crops, such as cassava (low return, low cost), moderately risky crops such as tomato (moderate return, moderate cost), and crops involving a high level of risk, such as oil palm nuts (high return, high cost). Moreover, the costs due may vary per season (depending upon the roll of the dice), which reflects the real-life situation where farmers do not know in advance to what extent, if at all, their investment will pay off. Better-off farmers are generally better equipped to go for higher risk options that hold the promise of a higher average return. Poorer farmers, by contrast, are more constrained in their options and more likely to display risk-averse behavior.

Another risk lies in the choice of location (zone on the playing board) for planting crops. By concentrating their landownership in one of the four zones, players can increase their chances of earning upgrades (hoe, truck, factory), which should in turn boost their earnings. These upgrades are intended to simulate a situation where agrarian policies favor larger-scale operations. After five seasons, however, each of the four zones is confronted with a particular event. This event may increase (market, mine, cooperative) or decrease (private investor, disease, flooding) the value of the land. To mitigate the potential impact of such an event, players may adopt a strategy whereby they acquire land in different zones. The necessity for poor players to spread their risk is apparent from the start of the game: "In a situation where small-scale farmers are just able to survive, their priority is not to maximize earnings but rather to secure their livelihoods by minimizing risks. This is also the only way to avoid bankruptcy in the course of the game" (memo by student participant, 2013). Better-off farmers, on the other hand, are able to acquire property in different zones and still earn upgrades through land consolidation.

A second observation mentioned in the introduction, is that the land arena is characterized by a plurality of norms. In LAND RUSH, there are formal rules (the basic rules of the game); but as the game progresses, informal norms may materialize (as a result of negotiations between the players and depending on the game dynamics). Informal norms may even start to contradict some of the formal rules, unintendedly – when players have forgotten a particular formal norm - or deliberately - when a consensus emerges among the players or when a player manages to manipulate the rules in their own favor. Both dynamics were observed by the game facilitators during the game experience in 2012 and 2013 with students of Development Studies. Some students reflected upon this in their personal memos. Most, however, only became aware of this aspect during the collective debriefing phase.

Another source of legal pluralism in the game dynamics lies in the reshuffling of land rights after each season. A roll of the die determines which category of player can

grab land or reshuffle land rights. This phase in the game illustrates the fact that land rights are never fixed or unequivocally defined: they are dynamic and subject to constant change. This flexibility leaves room for negotiation (for example, players may agree not to sabotage one another; poorer players may try to convince the others not to deny them their land rights). However, those who are better-off and/or better connected have a comparative advantage in such negotiations. This aspect was discussed quite vividly in many of the students' memos (2012, 2013 game experience).

This directly leads us to the third point, namely that land rights result from a negotiation process characterized by unequal power relations. These unequal power relations are incorporated into the game right from the start through the huge difference in starting capital and by the fact that the rich player is entitled to roll two dice rather than just one, enabling them to acquire land more quickly. Furthermore, as previously mentioned, the game dynamics should incite a negotiation process over informal norms. This negotiation process will depend on the game context, the personalities of the players, the power dynamics between the players and the institutional framework already in place.

In the debriefing phase, different students reflected upon the informal negotiation processes that unfolded during the game. Sometimes these resulted in an improvement of status for the poor; "The two poor players pooled their assets and created an alliance. One poor player even tried to form an alliance with all the poor players in the room [i.e. poor players in other LAND RUSH games] which would have given them the power to change things" (memo by student participant, 2013). Other negotiations resulted in exclusive arrangements between the better-off players to the detriment of the poorer players. One player testified that "only the rich players were able to change the rules to their advantage, whereas the poor lacked strategies for change; they felt weak and incapable of taking decisions or of getting organized" (memo by student participant, 2012). Yet other negotiated arrangements resulted in the creation of economic interdependencies, as poorer players' survival in the game became dependent on the benevolence of the better-off players. In one game, the rich player hired another player to manage his assets "just because I didn't feel like calculating my own revenues and expenditures" (memo by student participant, 2013).

This diversity of situations somehow illustrates the importance of being connected in a network and the different ways in which power can be exercised. Each player exerts agency (is capable of taking position, of acting and reacting to others). However, better-off players are relatively better equipped to bend the rules in their own favor. This is illustrated by the following quote: "After three seasons, the poor players tried to introduce a new rule called "food riot". However, this idea was quickly abandoned, as the rich player did not agree to its introduction. The discussion did not even take very long: the poor players quickly accepted the categorical refusal on the part of the rich player" (memo student participant, 2013).

To place these land dynamics in a broader and dynamic context, we introduced events that symbolize wider ongoing societal changes with a major impact on agrarian dynamics and land relations. The introduction of the market represents how rural policies push farmers from subsistence production towards commercially oriented production. On the one hand, a closer integration of local agrarian industries in the

global market creates opportunities (i.e. potentially higher returns in the affected zone). On the other hand, market-oriented farming carries risks (represented by an increase in operational costs in the affected zone), particularly for the poorer players (as they may not have the financial reserves to cope with these costs). Moreover, poorer farmers may lack capital to invest in plots in this zone, and they risk being pushed out of land in the profitable zone by the more wealthy players.

The introduction of a mine represents a situation in which new types of land use (e.g. mining, but also urban expansion, industrial expansion, tourism, etc.) enter into competition with food production. The presence of a mine in a particular zone changes the stakes for players in ways that are very similar to the introduction of a market. The presence of non-renewable resources instantly increases the commercial value of the land. In the affected zone, players transform from farmers into small-scale miners. Again, though, the opportunity (higher profits) comes at the risk of higher costs. Poorer participants are at an investment disadvantage in this zone and they risk being ousted. The richer players, on the other hand, are likely to further increase their land holdings (during a land reshuffle or when poorer players are forced to sell part of their property to avoid bankruptcy).

The introduction of a cooperative represents a situation in which collective action may improve the relative bargaining position of poorer farmers, which may positively impact upon their livelihoods. Indeed, the presence of a cooperative allows poorer players to pool their land and to benefit from potential upgrades. On the one hand, they must reach agreement on how to divide the returns, which may not be straightforward if one poor player contributes more land to the cooperative than the other. On the other hand, a positive experience of collective action may inspire poorer players also to collaborate and support each other in other ways. This may improve their relative bargaining position vis-à-vis the other players, and it may thus impact on the broader game dynamics.

The introduction of a private investor symbolizes the trend of large-scale land acquisitions (framed by some as 'land grabbing') that is ongoing in many developing countries. Investors may be either foreign or local. In fact, many of the recent examples of land acquisitions have involved local investors (Deininger 2011; see also Ansoms and Hilhorst, 2014). These investors may be interested in the productive potential of the land for food production or for biofuels, or they may be interested in the commercial value of the land as such: land is becoming an increasingly scarce and valuable resource in its own right, and it may therefore represent a viable alternative to other types of investments on volatile capital markets. A recent World Bank Report (2010A) highlights the potential benefits of the injection of private capital into the agricultural sector (e.g. through improved access to technology, facilitated access to capital markets, improved infrastructures, promotion of institutions that allow increased productivity and effectiveness in the utilization of land). It argues that potential risks may be countered through the promotion of responsible corporate behavior (on the part of the investors) and the enhancement of good land management (on the part of the recipient country). In reality, however, the extreme power disequilibrium between large-scale investors and local smallholders often has a perverse impact on local livelihoods (Borras and Franco 2010). This mechanism, too, is apparent in the game. Whereas farmers possessing oil palm plots (often the better-off farmers, as these are more expensive) are able to incorporate their land into a

plantation while retaining their ownership rights, farmers with cassava and tomato plots are simply ‘swallowed up’ and lose ownership. They become wage labourers employed by the private investor and earning meagre salaries.

The outbreak of a disease in a particular zone represents a situation in which farmers are confronted with a sudden loss of harvest. In this instance, farmers who invested in tomato or oil palms are disadvantaged, as the return on such plots is reduced (they become comparable to returns on cassava plots) and upgrades are no longer possible. The risk of such an event may have a profound impact on players’ strategies during the first five seasons of the game. Indeed, players will generally tend to buy plots in different zones, to avoid losing their entire investment when the event cards are turned around. When this event strikes, the land in the blighted zone is degraded, suitable only for the cultivation of cassava. Interestingly, the increased commercial value of land in other zones (market, mine) may push poorer farmers towards investing in this degraded land.

The event of a flood symbolizes how climate issues in the real world can have a profound and potentially devastating impact on agricultural production in general. Again, the possibility of such an event taking place may inspire players to spread their risk by acquiring land in different zones during the initial stage of the game. While seasonal variation has always been part of the agricultural production cycle, climate change is assumed to have significantly increased its unpredictability (World Bank 2010B). Poorer farmers in particular can be heavily affected by harvest failure, given that they often lack the necessary reserves as a safety net to overcome such events. In the game, this is reflected by the fact that a poorer player who has invested substantially in the affected zone is likely to face potential bankruptcy. Better-off players will generally have sufficient reserves to cope with the setback.

## **Conclusion**

Playing this board game simultaneously in several small groups can illustrate the potential diversity of outcomes. Previous experience shows that, in some games, the poor are blatantly exploited and go bankrupt. In others, they succeed in negotiating effectively, pushing the rich or middle-class players into the role of benefactors, and ensuring their own survival; sometimes this strategy actually allows the poor to thrive. In still other games, the poor players explore the potential of collective action, pooling their resources. This allows them to acquire much more land, to upgrade more easily, and to cope more effectively with risks. The game dynamics are also clearly affected by the occurrence of the events. In general terms, the diverse game outcomes suggest that each context is unique.

Still, it is impossible for any simulation game design to take into account the full complexity and potential variation in real-life situations. For example, the game employs a highly instrumental definition of land (focusing on its productive value) and barely considers the psycho-social significance of land to smallholder farmers. Moreover, the game adopts a model of individual accumulation (of both land and capital) as the basis for improved well-being. The limitations of this model may prevent players from considering ‘out-of-the-box solutions’ to developmental and environmental problems. It is important to highlight this potential shortcoming in the debriefing. Another implicit assumption of the game is that the wider societal changes

(‘events’) are externally defined and imposed upon the local setting. In reality, change is commonly the result of interaction between global, regional, and local dynamics. Furthermore, the impact of these societal changes upon local agrarian dynamics and land relations is presented in the game in rather black-and-white terms. The presence of foreign investors is ‘detrimental’, except to those cultivating oil palms; the establishment of a cooperative is ‘favorable’ to the poor as long as they can agree on a fair distribution of earnings. Reality, however, is never black or white, but more about different shades of grey.

Nonetheless, the game succeeds in demonstrating that negotiations in the land arena do not take place in a political vacuum, but rather in a context of legal pluralism. At the same time, the institutional confusion (with interacting, competing and potentially contradictory formal and informal norms) often plays to the advantage of the elite in society. They are better informed, better connected, and financially better equipped to engage in land-related negotiations. Yet, clearly the poor are not just passive victims: they, too, are able to exert agency, despite being constrained in their options. A truly pro-poor policy framework should therefore concentrate on removing those constraints, rather than focus on production and productivity maximization.

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### **Conflict of interest**

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article. Both graphical designers involved in the graphical elaboration of the game expressed their agreement with including their design into this article.

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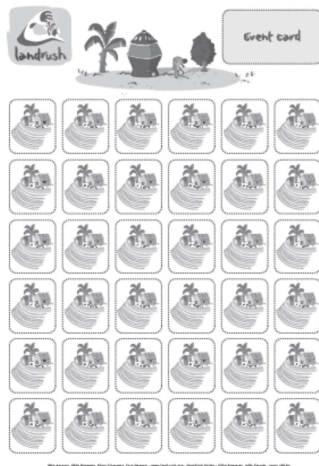
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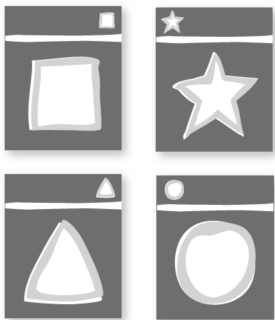
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**Annex: Materials (graphical design by Okke Bogaerts – independent graphical designer, and Julie Servais – [www.afd.be](http://www.afd.be))**

- **The playing board**



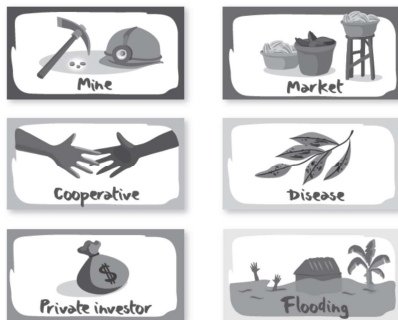
- **Player cards**



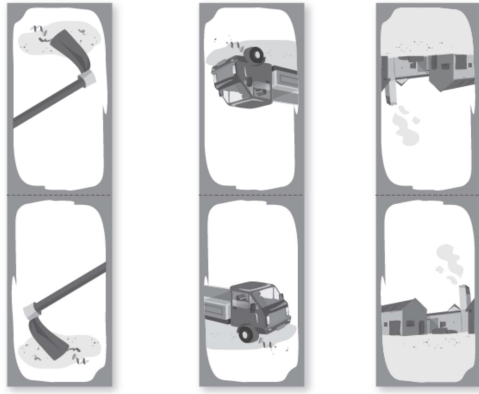
- **Crop cards:**



- **Event cards:**



- **Upgrade cards:**



- **Money:**



- **Table with costs and returns**

landrush	Initial phase		After events									
	Cost	Return	Cost Return		Cost Return		Cost** Return		Cost Return		Cost Return	
crop	2	1	4	2	10	6	-	1	2	1	2	1
crop	4	2	8	4	10	6	-	1	4	2	2	1
crop	6	3	12	6	10	6	-	3	6	3	2	1
upgrade		4		4		4		-		4*		-
upgrade		5		5		5		-		5*		-
upgrade		6		6		6		-		6*		-

\* Collective return for all players who are member of the cooperative.  
 \*\* Buying land in this zone is no longer possible.